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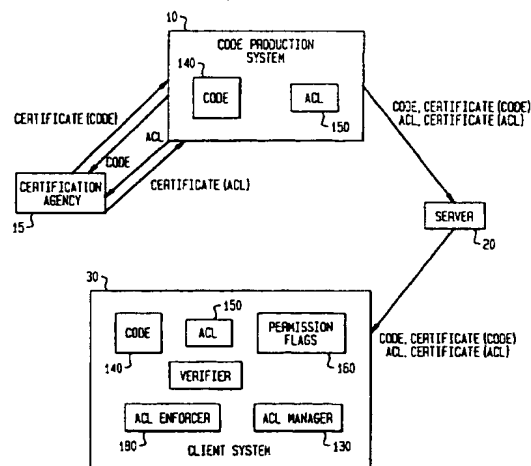• Ramaswami, Rajiv
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(54) **Support for trusted software distribution**

(57)   A form of authentication is provided wherein a trusted third party signs a certificate to identify the author of a program and to secure its integrity. The program code is encapsulated or otherwise associated with the certificate and an access control list (ACL). The access control list describes the permissions and resources required by the code. An enforcement mechanism which allocates system permissions and resources in accordance with the ACL. In a preferred embodiment, a code production system communicates with a certification agency, which is a trusted third party. The certification agency issues a certificate for the code and a certificate for the access list of that code. Once the certificate is issued it is not possible for any party to modify the code or access list without invalidating the certificate. The code and its ACL, along with their certificates are stored on a server. A client downloading the code or access list can verify the integrity of the code/access list and the system can enforce the access list such that the permissions and resources are not exceeded.

FIG. 1

EP 0 813 132 A3

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 97 30 3443

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X Y	US 5 412 717 A (FISCHER ADDISON M) 2 May 1995 (1995-05-02) * column 1, line 19 - line 25 * * column 2, line 24 - line 48 * * column 3, line 53 - line 61 * * column 5, line 38 - line 50 * * column 6, line 19 - column 7, line 13 * * column 7, line 43 - line 46 * * column 8, line 45 - line 66 * * column 9, line 58 - line 63 * * figures 2,3D,7,8,9A,9B,11 * ---	1-6,8,9, 11,12 10	G06F1/00 G06F9/46 H04L29/06
Y	DEAN D ET AL: "JAVA SECURITY: FROM HOTJAVA TO NETSCAPE AND BEYOND" PROCEEDINGS OF THE 1996 IEEE SYMPOSIUM ON SECURITY AND PRIVACY. OAKLAND, CA., MAY 6 - 8, 1996, PROCEEDINGS OF THE IEEE SYMPOSIUM ON SECURITY AND PRIVACY, LOS ALAMITOS, IEEE COMP. SOC. PRESS, US, vol. SYMP. 17, 6 May 1996 (1996-05-06), pages 190-200, XP000634844 ISBN: 0-7803-3527-9 * page 1 * ---	10	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G06F
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
MUNICH	18 November 2002	Bichler, M

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

European Patent
Office

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

| | European Patent Office | LACK OF UNITY OF INVENTION SHEET B | Application Number EP 97 30 3443 |

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-6, 8-12

    Distributing program code in which a recipient system receives a trusted third party certification including a computer readable description of resources and permissions required for verified non-harmful operation of the program code

2. Claims: 7,13-17

    Distributing program code in which a recipient system receives a trusted third party certification including a computer readable description of resources and permissions required for verified non-harmful operation of the program code in which the resource description includes data describing the maximum rate of consumption of each resource.

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82